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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary	Application No. 09/101,049	Applicant(s) LEDUC ET AL.	
	Examiner David E Graybill	Art Unit 2814	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *25 September 2000* .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *2-12,14-16,18-21 and 23-26* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *2-12,14-16,18-21 and 23-26* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. & 119(e).

Attachment(s)

15) ☒ Notice of References Cited (PTO-892)
16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
18) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
19) ☐ Notice of Informal Patent Application (PTO-152)
20) ☐ Other: .

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 2, 7, 10/7, 10/8, 14-16, 18, 19, 21, 23 and 25 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The following lack sufficient literal antecedent basis:

Claim 2, "said connection";

Claim 14, "the other face";

Claim 15, "the electric connection";

Claim 16, "carrier substrate";

Claim 19, "its largest measurement";

Claim 25, "plan."

In claim 7 it is not clear how the language "or of microcircuit" further limits the scope of the term "module" because, in claim 25, the module comprises the microcircuit.

In claim 8 the term "[any" is incomprehensible.

In claim 8 it is not clear how the language "and of the electronic microcircuit" further limits the scope of the term

"module" because, in claim 25, the module comprises the microcircuit.

In claim 18 the term "[in" is incomprehensible.

Claim 18/17 is rejected as incomplete because it depends on canceled claim 17.

In claim 25, line 7, there appears to be a typographical error after the term "electronic."

Claims 16, 18/16 and 23 have not been rejected over the prior art because, in light of the 35 U.S.C. 112 rejections supra, there is a great deal of confusion and uncertainty as to the proper interpretation of the limitations of the claims; hence, it would not be proper to reject the claims on the basis of prior art. As stated in In re Steele, 305 F.2d 859, 134 USPQ 292 (CCPA 1962), a rejection should not be based on considerable speculation about the meaning of terms employed in a claim or assumptions that must be made as to the scope of the claims. See also MPEP 2173.06.

In the rejections infra, reference labels are recited only for the first recitation of identical claim language.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.
>
> (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

Claims 7, 14, 15 and 25 are rejected under 35 U.S.C. 102(e) as being anticipated by Iwasaki (5710458).

At column 2, line 37 to column 4, line 35, Iwasaki teaches a device comprising a carrier substrate 1 having a major plane surface; an antenna 4, 4' mounted on the substrate and having a plurality of turns parallel to the major plane surface; an electronic microcircuit 2 connected to the antenna; whereby the module is self-contained and may be mounted in a recess in a contactless card or used as a contactless electronic label, wherein the microcircuit is placed in the center of the antenna and on the same side of the module as the antenna, with connection terminals of the antenna being connected to corresponding, respective contact pads 2a of the microcircuit, and on one face of the carrier the antenna 4' is connected (electrically) to the microcircuit and on the other face of the carrier visible contacts 1b are also connected to the microcircuit thereby providing a hybrid module able to be read and written on via antenna.

Iwasaki also teaches a process comprising, on a substrate carrier, making a plane spiral antenna of small size provided with connection terminals; fixing on the carrier a microcircuit provided with contact pads; and making an electric connection between the terminals and the contact pads

Although Iwasaki does not appear to explicitly teach the limitation whereby the module is self-contained, this is an inherent characteristic of the module of Iwasaki.

Also, although Iwasaki does not appear to explicitly teach that the module may be mounted in a recess in a contactless card or used as a contactless electronic label, this limitation is a statement of intended use which does not result in a structural difference between the claimed apparatus and the apparatus of Iwasaki. Further, because the product of Iwasaki is inherently capable of being used for the intended use, the statement of intended use does not patentably distinguish the claimed product from the product of Iwasaki. Similarly, the manner in which a product operates is not germane to the issue of patentability of the product; Ex parte Wikdahl 10 USPQ 2d 1546, 1548 (BPAI 1989); Ex parte McCullough 7 USPQ 2d 1889, 1891 (BPAI 1988); In re Finsterwalder 168 USPQ 530 (CCPA 1971); In re Casey 152 USPQ 235, 238 (CCPA 1967). Also, claims directed to product must be distinguished from the prior art in terms of structure rather

than function. In re Danley, 120 USPQ 528, 531 (CCPA 1959). "Apparatus claims cover what a device is, not what a device does." Hewlett-Packard Co. v. Bausch & Lomb Inc., 15 USPQ2d 1525, 1528 (Fed. Cir. 1990).

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 2, 3 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Iwasaki (5710458).

Iwasaki is applied to the claims as it was applied supra.

Also, Iwasaki teaches that the antenna is a conductor spiral comprising between approximately 6 and approximately 50 turns, the width of each turn being 300 μm, wherein the outer shape of the spiral is substantially square.

Furthermore, in view of the teaching that the microcircuit length is 10mm, the plane surface length is 20mm, and Figures 1 and 2, it appears reasonable to deduce that the spiral is 5 to 15mm.

However, Iwasaki does not appear to explicitly teach the particular claimed space dimensions.

In any case, it would have been an obvious matter of design choice bounded by well known manufacturing constraints and ascertainable by routine experimentation and optimization to choose the particular claimed spiral and space dimensions because applicant has not disclosed that the dimensions are for a particular unobvious purpose, produce an unexpected result, or are otherwise critical, and it appears prima facie that the process would possess utility using other dimensions. Indeed, it has been held that limitations directed to size are prima facie obvious absent a disclosure that the limitations are for a

particular unobvious purpose, produce an unexpected result, or are otherwise critical. See, for example, In re Rose, 220 F.2d 459, 105 USPQ 237 (CCPA 1955); In re Rinehart, 531 F.2d 1048, 189 USPQ 143 (CCPA 1976); Gardner v. TEC Systems, Inc., 725 F.2d 1338, 220 USPQ 777 (Fed. Cir. 1984), cert. denied, 469 U.S. 830, 225 USPQ 232 (1984); In re Dailey, 357 F.2d 669, 149 USPQ 47 (CCPA 1966).

Claims 4 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Iwasaki as applied to claim 3 supra, and further in combination with Inoue (4960983).

Iwasaki does not appear to explicitly teach that the outer shape of the spiral is substantially circular or oval. Nonetheless, at column 3, line 26 to column 6, line 57, Inoue teaches a substantially circular and a substantially oval antenna. Moreover, it would have been obvious to combine the product of Inoue with the product of Iwasaki because it would provide an antenna.

Also, in view of the teaching that the microcircuit length is 10mm, the plane surface length is 20mm, and Figures 1 and 2, it appears reasonable to deduce that the spiral has an outer diameter of approximately 12mm and a larger measurement of approximately 15mm.

However, Iwasaki does not appear to explicitly teach that the spiral has a smaller measurement of approximately 5mm.

In any case, it would have been an obvious matter of design choice bounded by well known manufacturing constraints and ascertainable by routine experimentation and optimization to choose these particular spiral dimensions because applicant has not disclosed that the dimensions are for a particular unobvious purpose, produce an unexpected result, or are otherwise critical, and it appears prima facie that the process would possess utility using other dimensions.

Claims 8 and 25 are rejected under 35 U.S.C. 102(a) as being anticipated by Hayashi (7-146922).

In the English abstract and figures 7(A) and 7(B), Hayashi teaches a device comprising a carrier substrate 94a having a major plane surface; an antenna 92c mounted on the substrate and having a plurality of turns parallel to the major plane surface; an electronic microcircuit 100 connected to the antenna; whereby the module is self-contained and may be mounted in a recess in a contactless card or used as a contactless electronic label, wherein the microcircuit is placed on the same side as the antenna, astride its turns, with connection terminals of the antenna being connected to contact pads of the microcircuit via conductor leads 104a, 104b, 106, and an insulator 94b located

between the microcircuit and the antenna zone under the microcircuit.

Claims 9 and 25 are rejected under 35 U.S.C. 102(a) as being anticipated by Hayashi (7-239922).

In the English abstract and figures, Hayashi teaches a device comprising a carrier substrate 11 having a major plane surface; an antenna 13 mounted on the substrate and having a plurality of turns parallel to the major plane surface; an electronic microcircuit 16 connected to the antenna; whereby the module is self-contained and may be mounted in a recess in a contactless card or used as a contactless electronic label, wherein the microcircuit is located on a side of the module major plane surface with no antenna, with connection terminals 7, 8 of the antenna being connected to corresponding, respective contact pads of the microcircuit via conductor leads crossing over wells 15 made in the carrier substrate at a level of the connection terminals of the antenna.

Claims 10-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Iwasaki as applied to claim 7 supra, and further in combination with de Vall (5541399).

Iwasaki does not appear to explicitly teach a tuning capacitor connected in parallel to terminals of the antenna to contact pads of the microcircuit, the value of the capacitor

being chosen to obtain an operating frequency for the module in the range of approximately 1 MHz to 450 MHz. Nevertheless, at column 3, lines 4-50, de Vall teaches this limitation (400 KHz is approximately 1 Mhz). In addition, it would have been obvious to combine the product of de Vall with the product of Iwasaki because it would enable circuit tuning.

However, the combination of Iwasaki and de Vall does not appear to explicitly teach the particular claimed tuning capacitor values and module operating frequencies. Still, it would have been an obvious matter of design choice bounded by well known manufacturing constraints and ascertainable by routine experimentation and optimization to choose the particular claimed tuning capacitor values and module operating frequencies because applicant has not disclosed that the limitations are for a particular unobvious purpose, produce an unexpected result, or are otherwise critical, and it appears prima facie that the process would possess utility using another value or frequency. Indeed, it has been held that optimization of range limitations are prima facie obvious absent a disclosure that the limitations are for a particular unobvious purpose, produce an unexpected result, or are otherwise critical.

Claims 19 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Moskowitz (5528222).

At column 3, line 65 to column 7, line 39, Moskowitz teaches an electronic label, intended for object identification, comprising an electronic module 810 of small size, an electronic microcircuit 830 mounted thereon, an antenna 815 of small size arranged on the module and connected to the microcircuit, characterized in that the module is fixed on a carrier 800 so that the label may be made part of an object to be identified.

However, Moskowitz does not appear to explicitly teach the module's largest measurement being in the region of 5 to 15 mm. Regardless, it would have been an obvious matter of design choice bounded by well known manufacturing constraints and ascertainable by routine experimentation and optimization to choose this particular dimension because applicant has not disclosed that the dimension is for a particular unobvious purpose, produces an unexpected result, or is otherwise critical, and it appears prima facie that the process would possess utility using another dimension.

Claims 20 and 25 are rejected under 35 U.S.C. 102(e) as being anticipated by Moskowitz (5528222).

At column 3, line 65 to column 7, line 39, Moskowitz teaches an electronic label 810 provided with a device comprising a carrier substrate 220 having a major plane surface; an antenna 230 mounted on the substrate and having a plurality

of turns parallel to the major plane surface; an electronic microcircuit 210 connected to the antenna; whereby the module is self-contained and may be mounted in a recess in a contactless card or used as a contactless electronic label.

Claim 24 is rejected under 35 U.S.C. 102(e) as being anticipated by Fidalgo (5690773).

At column 1, line 7 to column 5, line 50, Fidalgo teaches a device comprising a carrier substrate 5 having a major plane surface; an antenna 7 mounted on the substrate and having a plurality of turns parallel to the major plane surface; an electronic microcircuit 6 connected to the antenna; whereby the module is self-contained and may be mounted in a recess in a contactless card or used as a contactless electronic label; cutting out from a contactless card a first element 23 incorporating the module to a given shape so as to leave substance around the module; cutting out from a card 14 a second element having the same shape as the first element; and assembling the first and second elements in such manner that the module is incorporated between the elements and protected by the latter.

Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Iwasaki and de Vall as

applied to claim 10 supra, and further in combination with Koo (4156249).

The combination of Iwasaki and de Vall teaches an insulating layer 26.

However, the combination of Iwasaki and de Vall does not appear to explicitly teach wherein the capacitor comprises a deposited oxidized silicon layer on the insulating layer. Notwithstanding, at column 5, line 26 to column 6, line 27, Koo teaches this limitation. Furthermore, it would have been obvious to combine the product of Koo with the product of de Vall because it would provide a capacitor layer.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any telephone inquiry of a general nature or relating to the status (MPEP 203.08) of this application or proceeding should be directed to the group receptionist whose telephone number is 703-308-1782.

Any telephone inquiry concerning this communication or earlier communications from the examiner should be directed to David E. Graybill at (703) 308-2947. Regular office hours: Monday through Friday, 8:30 a.m. to 6:00 p.m.

The fax phone number for group 2800 is 703/305-3431.

David E. Graybill
Primary Examiner
Art Unit 2814

D.G.
3-Jan-01